

**WHAT IS CLAIMED IS:**

1. A combined building air-conditioning unit and NBC protection system, comprising

an enclosed space housing a building air-conditioning unit and further including a plurality of chambers;

a first chamber having an ambient air inlet port, at least one prefilter and a blower for sucking air through said prefilter;

a second chamber having valve means having an open and closed state, receiving air from said blower and accommodating a C-detector and a valve means actuator, responsive, at least indirectly to, and operable by, said C-detector, and

a third chamber housing at least one C-filter and a blower for sucking air from said second chamber via said C-filter into the building when said valve means is in its closed state.

2. The system as claimed in claim 1, wherein said prefilter is a filter protecting against chemical contaminants.

3. The system as claimed in claim 1 further comprising at least one filter protecting against biological hazards installed in said first chamber.

4. The system as claimed in claim 1, wherein said C-detector is selected from the group of chemical analyzers including gas chromatographs (GC), mass spectrometers (MS), ionmobility spectrometers (IMS) and infrared spectrographs (IS).

5. The system as claimed in claim 1, further comprising a transmitter operationally coupled to said detector for transmitting a signal upon detecting a hazardous chemical.

6. The system as claimed in claim 5, wherein said actuator further comprises a receiver for receiving a signal transmitted by said detector transmitter and actuating the closing of said valve means.

7. The system as claimed in claim 5, wherein said detector activates the operation of said C-filter and blower upon detecting a hazardous chemical

8. The system as claimed in claim 1, further comprising a transceiver for receiving a warning signal against a possible NBC attack and transmitting a warning signal to said valve means actuator and C-filter and blower.

9. The system as claimed in claim 8, wherein said actuator closes the valve means and said C-filter and blower are activated upon receiving a signal from said transceiver.

10. The system as claimed in claim 1, wherein said C-filter and blower are operable to enhance overpressure inside said building.

11. The system as claimed in claim 1, wherein said second chamber and said third chamber share at least a portion of a common wall.

12. The system as claimed in claim 1, further comprising at least one airlock unit communicating with any one of said chambers, facilitating entering the system during its operation, without the danger of contamination.

13. A method for economically controlling air purity within a protected space, said method comprising

providing a combined building air-conditioning unit and a NBC protection system having an enclosed space housing a building air-conditioning unit and further including a plurality of chambers; a first chamber having an ambient air inlet port, at

least prefilter and a blower; a second chamber having valve means receiving air from said blower and accommodating a C-detector and a valve means actuator responsive to, and at least indirectly, operable by said C-detector, and a third chamber housing at least one C-filter and a blower;

sucking ambient air into said first chamber by said blower and activating said C-detector, and

causing the valve means of said second chamber to close and activate said C-filters and blowers upon detecting C-contamination by said C-detector.

14. A method for economically controlling air purity within a protected space, said method comprising

providing a combined building air-conditioning unit and a NBC protection system having an enclosed space housing a building air-conditioning unit and further including a plurality of chambers; a first chamber having an ambient air inlet port, at least prefilter and a blower; a second chamber having valve means receiving air from said blower and accommodating a C-detector and a valve means actuator responsive to, and at least indirectly, operable by said C-detector, and a third chamber housing at least one C-filter and a blower;

sucking ambient air into said first chamber by said blower and activating said C-detector, and

causing the valve means of said second chamber to close and activate said C-filters and blowers upon receiving a signal from an NBC attack warning station.